

Milford Junction

TRUPOINTE COOPERATIVE, CARGILL TEAM UP TO BUILD AN INDIANA RAIL TERMINAL

TruHorizons LLC

Milford, IN • 574-658-3327

Founded: 2012

Storage capacity: 7.7 million bushels at three locations

Annual volume: 13.5 million bushels

Annual sales: \$50 million

Number of employees: 31

Crops handled: Corn, soybeans, soft red winter wheat

Services: Grain handling and merchandising, agronomy

Key personnel at Milford:

- Leland Hartstack, general manager
- Kyle Lehman, grain manager
- Todd Schubert, project manager
- Tom Miller, project engineer

Supplier List

Aeration fans AIRLANCO

Aeration system North American Equipment Co. Inc.

Bearing sensors CMC Industrial Electronics

Bin sweeps Springland Mfg.

Bucket elevators..... InterSystems

Bulk weigh scale InterSystems

Bulk weigh scale controls..... CompuWeigh Corp.

Catwalks LeMar Industries

Contractor SMA LLC

Control system..... Control Stuff Inc

Conveyors (belt).....Hi Roller Conveyors

Conveyors (drag)InterSystems

Distributor..... InterSystems

Dust collection ... Donaldson-Torit

Elevator bucketsMaxi-Lift Inc.

Engineering .. in-house, Clear Creek & Associates Inc.

Fall protectionFall Protection Systems Corp.

Grain dryers... Zimmerman Grain Dryers

Grain temp cables... Tri-States Grain Conditioning Inc.

Level indicators..... Siemens, 4B Components Ltd.

Manlift..... Sidney Mfg. Co.

Moisture meter . Perten Instruments

Motion sensors CMC Industrial Electronics

Sampler..... InterSystems

Steel storage... Brock Grain Systems

Temporary storage.. LeMar Industries

Tower support system... LeMar Industries

Truck probe InterSystems

Truck scales..... Brechbuhler

Truck scale automation... CompuWeigh



The new TruHorizons LLC 4.4-million-bushel rail terminal with loop track just north of Milford, IN. Aerial photo by Schmidty Views, LLC, Fortville, IN.

The Norfolk Southern (NS) and CSX Transportation are the two main Class I railroads serving the eastern half of the United States. For all of their thousands of miles of track, however, the two railroads have only two junctions outside of cities or towns. One of those two locations is approximately two miles north of the town of Milford, IN.

The location makes it a near-perfect spot for a \$70 million grain and agronomy complex. TruHorizons LLC launched that complex at the beginning of September 2016, which includes a 4.4-million-bushel rail terminal elevator with loop track and a 38,000-ton fertilizer plant.

TruHorizons has been in existence only since 2012, a venture between Cargill AgHorizons and

General Manager Leland Hartstack (left) and Grain Manager Kyle Lehman. Ground-level photos by Ed Zdrojewski.



Piqua, OH-based TruPointe Cooperative. The venture also includes two other northern Indiana rail terminals at Bremen and La Paz, but those are served by single railroads, says Kyle Lehman, grain manager at Milford who has been there since May 2016, most recently having worked at an FC Cooperative elevator in Iowa.

TruHorizons acted as its own general contractor on the project. Among the major contractors the grain handler brought in on the project:

- SMA LLC, Monticello, MN (888-259-9220), did the design work on the concrete





A pair of 4,700-bph Zimmerman grain dryers are serviced by Intersystems 20,000-bph wet and dry legs enclosed in a LeMar support tower.

foundations and slipform concrete tanks and built the slipform concrete structure.

- Don R. Fruchey Inc., Fort Wayne, IN (260-749-8502), was the millwright.

- Clear Creek & Associates Inc, Goshen, IN (574-537-9060), engineered all foundations, coordinated all mechanical equipment and structural components, and engineered and provided fabrication drawings for all custom structures and hoppers.

- Control Stuff Inc, Cologne, MN (952-466-2175), supplied the control systems.

- Area Energy & Electrical Inc., Sidney, OH (937-498-4784), served as electrical contractor.

- LoweCon LLC, Crawfordsville, IN (765-866-8231), erected the steel tanks.

Three Types of Storage

The Milford facility blends three types of grain storage: An eight-pack of 133,000-bushel slipform concrete tanks with three interstices; two 739,000-bushel Brock corrugated steel tanks; and a

1.8-million-bushel LeMar temporary storage ring. Tom Miller, TruHorizons project engineer, says the concrete storage provides longevity, as the tanks are filled and emptied frequently for rail loading. The steel tanks are intended for longer-term storage, while the temporary pile is necessary with the huge crops that are becoming the norm in northern Indiana.

The eight slipform tanks stand 42 feet in diameter and 132 feet tall. They are outfitted with four TSGC grain temperature cables, Siemens radar-type level indicators, 4B limit switches, and North American Equipment Kanal System floors for aeration and air-assisted unloading. Four AIRLANCO 60-hp centrifugal fans provide air for all eight tanks at 1/9 cfm per bushel for aeration purposes.

The Brock tanks stand 105 feet in diameter and 126 feet tall at the eaves. They are equipped with 24-cable TSGC grain temperature monitoring systems, 16-inch Springland sweep augers, similar level indicator equipment to the concrete tanks, and four 50-hp Chicago Blower centrifugal fans per tank supplying 1/10 cfm per bushel of aeration. Extra-heavy-duty sidewalls and stiffeners allow the roof to be self-supporting.

The LeMar ring stands 305 feet in diameter with an asphalt floor and 10-foot perforated steel sidewalls. A 40,000-bph overhead Hi Roller Hi Life enclosed belt conveyor carries grain out to a center fill tower, and a set of fourteen 7.5-hp Chicago Blower axial fans supply air for holding the tarp in place. A fixed 10,000-bph Intersystems drag conveyor in a below-ground trench is used for unloading.

Grain Handling

Incoming grain trucks are sampled by an InterSystems probe, then proceed to a 108-foot Brechbuhler pitless scale under the control of a CompuWeigh Smart-Truck routing system with SmartView digital displays.

After weighing, trucks continue to one of two large enclosed 2,000-bushel mechanical receiving pits. Each pit is equipped with eight Torit® PowerCore® CPV dust collectors from Donaldson.

Each pit feeds its own 20,000-bph InterSystems leg outfitted with two rows of Maxi-Lift 14x8 CC-MAX low-profile gray buckets on 30-inch belts. The legs empty into an eight-duct InterSystems swing-type double distributor outfitted

with ceramic lining on wear surfaces.

From there, a pair of 20,000-bph InterSystems drag conveyors take grain out to concrete storage, with one of the 20,000-bph drags and a 40,000-bph Hi Life enclosed belt continuing on to the steel tanks.

The concrete tanks empty onto a series of below-ground 60,000-bph Hi Life enclosed belt conveyors, while the steel tanks empty onto 40,000-bph belts. These run through below-ground tunnels to a 60,000-bph shipping leg outfitted with three rows of 20x8 Maxi-Lift low-profile CC-MAX gray buckets on a 64-inch belt.

The shipping leg plus one of the two receiving legs can deliver grain to an 60,000-bph Intersystems bulk weigh loadout scale under the control of a CompuWeigh GMS system. Plans call for the addition of grain cleaners ahead of the bulkweigher at a future date. Workers atop railcars are protected by a 700-foot trolley system from Fall Protection Systems.

The facility also includes a pair of 4,700-bushel Zimmerman tower dryers fired by natural gas. Miller explains that the redundant systems allow for drying to continue if one of the dryers breaks down.

Miller estimates that it will take roughly eight hours to load a shuttle train, once the system gets up to speed.

Ed Zdrojewski, editor